Part. II

19~~5~~48-54 **File No.** S26/101559

B CLASS. P.W. DEPARTMENT
J BRANCH

Subject:— Loan & services of
Mr. Hugo Marek

B [K] 1950

-I

B [K] 1950.

pt II

File No. S-26 | 101559

-Etd. Scott. Slip. 24 A

J B8

Std. Sectt. 78 a.

G.R., G.D., No. 2408, dated 22-6-22.]

Correspondence

DOCKET SHEET

Part II

Subject :—

File No. S-26/401559

P.W DEPT.

J BRANCH.

References :—

Separated ~~Copies~~ from the original file B[illegible]

Date.	To whom sent.	Notes and instructions.

Loss of Head and afflux calculations.

Cut in mile No.29 of the Ghataprabha Left Bank Canal between M 28 - 1960 ft and M 28-4160 ft.

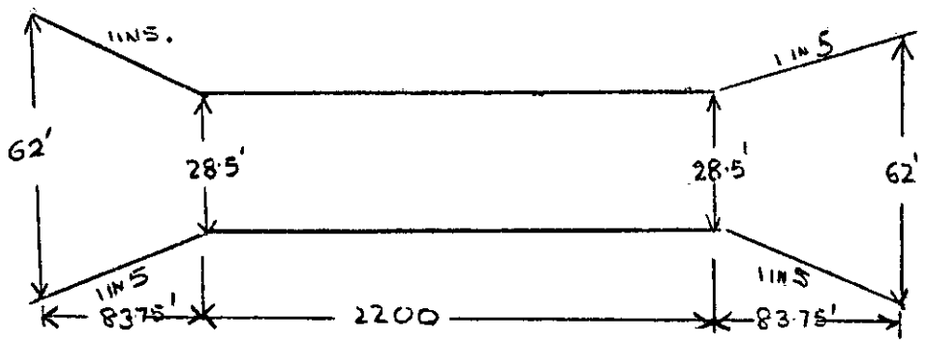
Length of cut = 4160 - 1960 = 2200 ft.

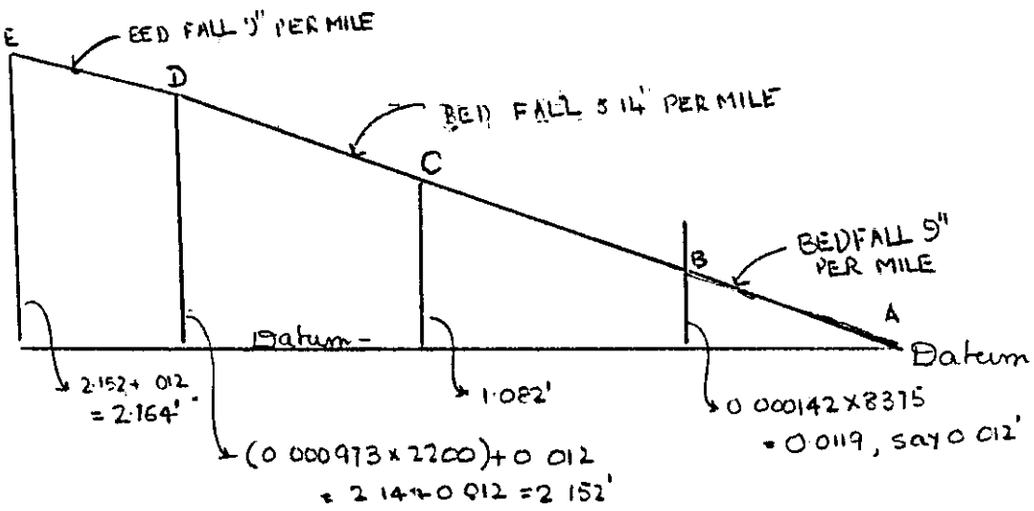
Bed width provided in the sanctioned project = 30.5 ft.

Allowing 2' for lining, bed width = 28.5 feet

Bed slope = 5.14 feet per mile

= 0.000973 feet per ft.





(NOT TO SCALE).

Notations:

d = depth at any section.
A = Area at any section
V = Velocity
E = Energy head
R = Hydraulic Mean Depth
h_f = frictional Head between two sections
h_E = Loss of head due to enlargement
h_c = Loss of head due to contraction

Section A.

d_A = 8 ft. Side slopes ½ to 1

A_A = (62+4) x 8 = 66x8 = 528 sq. feet.

$V_A = \frac{1352}{528}$ = 2.56 ft/sec

Therefore....

Therefore $E_A = 8 + \frac{2.56^2}{64} = 8 + 0.102 = 8.102'$

$$R_A = \frac{528}{62+8\sqrt{5}} = \frac{528}{62+17.89} = \frac{528}{79.89}$$

$$= 6.6 \text{ feet}$$

Section B

Assume $d_B = 7.7$ feet

$A_B = (28.5 + 3.8) \times 7.7$

$= 32.3 \times 7.7 = 248.71$ sq. ft.

$V_B = \frac{1352}{248.7} = 5.43$ ft/sec

$E_B = 7.7 + 0.012 + \frac{5.43^2}{64}$

$= 7.712 + \frac{29.48}{64}$

$= 7.712 + 0.46$

$= 8.172$ ft.

$R_B = \frac{248.7}{28.5+7.7\sqrt{5}} = \frac{248.7}{28.5+17.22}$

$= \frac{248.7}{45.72} = 5.44$ ft.

Average $v = \frac{2.56 + 5.43}{2} = \frac{7.99}{2}$

$= 3.99$ ft/sec
or say 4'/sec

Average $R = \frac{6.6 + 5.44}{2} = \frac{12.04}{2}$

$= 6.02$ ft.

$C = \frac{1.486}{0.02} \times 6.02^{1/6} = 100$

$h_{f\ AB} = \frac{4^2 \times 83.75}{100^2 \times 6.02} = 0.223$ ft.

Loss of head due to Enlargement

$h_E = 0.2 \left(\frac{5.43^2 - 2.56^2}{64} \right)$

$= \frac{0.2}{64} [(5.43 + 2.56)(5.43-2.56)]$

$= \frac{0.2}{64} (7.99 \times 2.87)$

$= \frac{0.2}{64} \times 22.93 = \frac{4.586}{64}$

$= 0.0717'$

Therefore $E_B = E_A + h_{f\,AB} + he$

$= 8.102 + 0.0223 + 0.0717$

$= 8.196$

Therefore Exact value of $d_B = 7.7 + 8.196 - 8.172$

$= 7.7 + 0.024 = 7.724$ ft.

For $d_B = 7.724$ ft values of v_B and R_B will be almost the same as those for $d_B = 7.7'$

Section C

Assume $d_c = 7.2$ ft.

$A_c = (28.5 + 3.6) \times 7.2$

$= 32.1 \times 7.2 = 231.12$ sq.ft.

$V_c = \frac{1352}{231.12} = 5.85$ ft/sec

$E_c = 7.2 + 1.082 + \frac{5.85^2}{64}$

$= 8.282 + \frac{34.22}{64}$

$= 8.282 + 0.535 = 8.817$ ft.

$R_c = \frac{231.12}{28.5 + 7.2\sqrt{5}} = \frac{231.12}{28.5 + 16.1} = \frac{231.12}{44.6}$

$= 5.18$ ft.

Average $v = \frac{5.43 + 5.85}{2} = \frac{11.28}{2}$

$= 5.64$ ft/sec

Average $R = \frac{5.44 + 5.18}{2} = \frac{10.62}{2}$

$= 5.31$ ft.

$C = \frac{1.486}{0.02} \times 5.31^{1/6} = 98.13$

$h_{f\,BC} = \frac{5.64^2 \times 1100}{98.13^2 \times 5.31} = 0.684'$

$E_c = E_B + h_{f\,BC} = 8.196 + 0.684 = 8.88$

Therefore Exact value of dc $= 7.2 - 8.817 + 8.88$

$= 7.2 + 0.063$

$= 7.263$ ft. $(= 7.26364)$

Section.....

Section D

Assume d_D = 6.95 ft.

A_D = (28.5 + 3.47) x 6.95

= 31.97 x 6.95 = 222.19 sq.ft.

$V_D = \frac{1352}{222.19}$ = 6.08 ft/sec.

$E_D = 6.95 + 2.152 + \frac{6.08^2}{64}$

= 9.102 + 0.577

= 9.679 ft.

$R_D = \frac{222.19}{28.5+6.95\sqrt{5}} = \frac{222.19}{28.5+15.54}$

$= \frac{222.19}{44.04}$ = 5.04 ft.

Average $v = \frac{5.85 + 6.08}{2} = \frac{11.93}{2}$

= 5.96 ft/sec.

Average $R = \frac{5.18 + 5.04}{2} = \frac{10.22}{2}$ = 5.11 ft.

$C = \frac{1.486}{0.02} \times 5.11^{1/6}$ = 97.5

$h_{f\ CD} = \frac{5.96^2 \times 1100}{97.5^2 \times 5.11}$ = 0.804'

$E_D = Ec + h_{f\ CD}$ = 8.88 + 0.804

= 9.684 ft.

Therefore exact d_D = 6.95 + 9.684 - 9.679

= 6.95 + 0.005 = 6.955'

Section E

Assume d_E = 7.5 ft.

A_E = (62 + 3.75) x 7.5

= 65.75 x 7.5 = 493.125 sq. ft.

$V_E = \frac{1352}{493.12}$ = 2.74 ft/sec.

$E_E = 7.5 + 2.164 + \frac{2.74^2}{64}$

= 9.664 + 0.117

= 9.781 ft.

R_E.....

$$R_E = \frac{493.12}{62 + 7.5\sqrt{5}} = \frac{493.12}{62+16.77}$$

$$= \frac{493.12}{78.77}$$

$$= 6.26 \text{ feet}$$

$$\text{Average R} = \frac{5.04 + 6.26}{2} = \frac{11.30}{2} = 5.65 \text{ ft.}$$

$$\text{Average V} = \frac{6.08 + 2.74}{2} = \frac{8.82}{2} = 4.41 \text{ ft/sec}$$

$$C = \frac{1.486}{0.02} \times 5.65^{1/6} = 99.17$$

$$h_f \text{ DE} = \frac{4.41^2 \times 83.75}{99.17^2 \times 5.65} = 0.0293 \text{ ft.}$$

Loss of head due to contraction

$$hc = 0.1 \left(\frac{6.08^2 - 2.74^2}{64} \right)$$

$$= \frac{0.1}{64} \left[(6.08 + 2.74)(6.08-2.74) \right]$$

$$= \frac{0.1}{64} \left[8.82 \times 3.34 \right]$$

$$= \frac{0.1}{64} \times 29.46$$

$$= \frac{2.946}{64} = 0.046 \text{ ft.}$$

$$E_E = E_D + h_{fDE} + hc$$

$$= 9.684 + 0.0293 + 0.046$$

$$= 9.7593 \text{ ft.}$$

Therefore Exact $d_E = 7.5 + 9.759 - 9.781$

$$= 7.5 - 0.022$$

$$= 7.478 \text{ ft.}$$

Therefore, Draw down between sections A and E

$$= 8 - 7.478 = 0.522 \text{ ft.}$$

Loss....

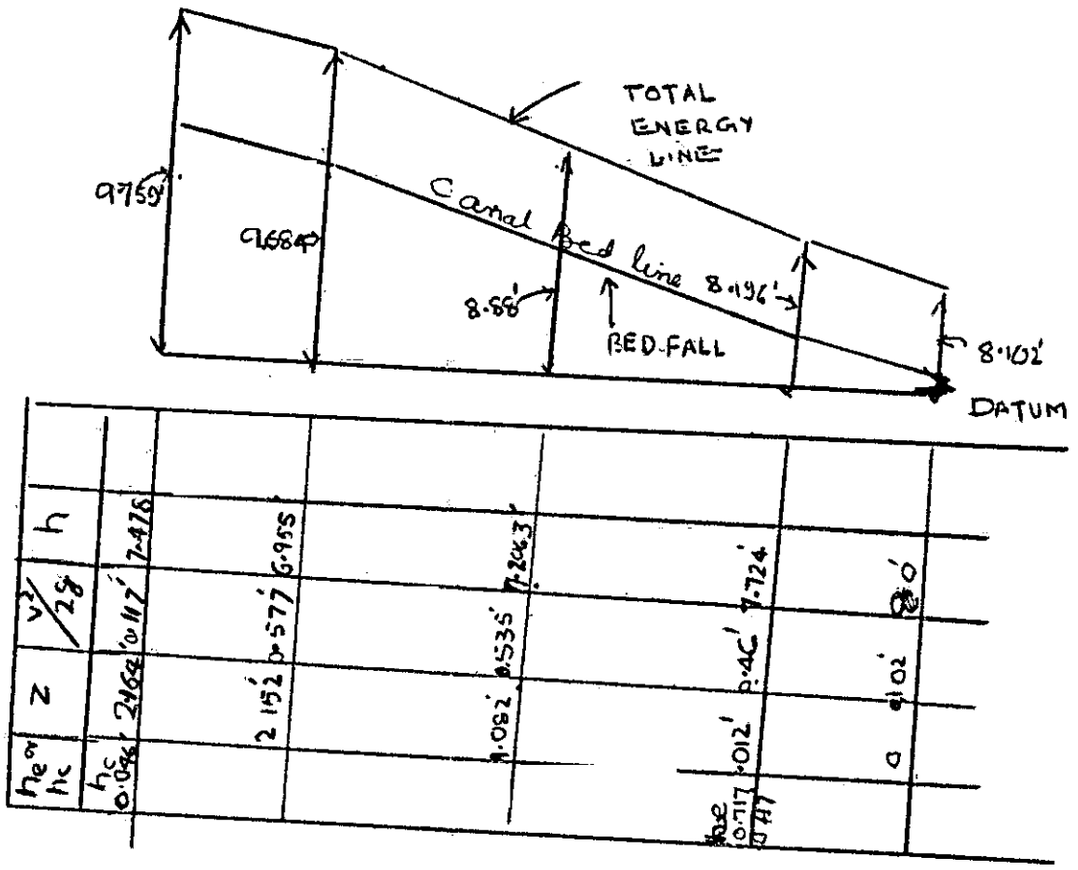
Loss of head between Sections and A and E

= 9.759 - 8.102

= 1.657 ft.

Bed fall provided between sections A & E

= 2.164 ft.



Letter

No.Gh.L.B. Karnataka Irrigation Circle,
Dharwar, 23rd Oct., 1951.

To

The Chief Engineer to Government,
Public Works Department,
Bombay.

Subject:- Allowance for the loss of head due to change of sections in the Ghataprabha Left Bank Canal.

Reference: Government endorsement No.S 26/ 27774-I.B.(II), dated 6-4-1951.

I have to offer the following remarks on the points raised by Shri.N.S.Joshi, in his letter dated 18-2-1951 addressed to the Executive Engineer, Ghataprabha Left Bank Canal Division, Ghataprabha and copy to the Chief Engineer, P.W.D.,Bombay and to this office.

(1) Value of N

The value of 'N' in jagged cuts, such as in the approach cut, actually adopted will be 0.04 which is in conformity with the observations made. The estimate provides for lining most of the cuts where a value of 0.02 for 'N' will be adopted.

(II) Slips in embankments

To minimise settlements and slips core is generally made up of brown soil and an allowance for settlement is provided for in the heights of banks. The material is generally laid in 6 inches layers and rolled.

(III) Damage due to percolation

Percolation cannot be completely avoided in gerti layers and earthen channels. Measures like lining the channels will have to be adopted wherever necessary and will be adopted after seeing the behaviour of the canal for some years.

(IV) Want of provision for increase in velocity at heads of cuts.

It is true that in the designs and estimates sent up to Government by Shri.N.S.Joshi, the then Superintending Engineer, no specific provision was made for afflux due to constriction in cuts. But the bed widths for cuts provided in the sanctioned (1924) project are greater than the actual bed widths required for a lined section (N = 0.02), with the particular bed fall assumed to pass the requisite discharge. Hence, for the adopted bedwidth the requisite discharging capacity can be obtained by lining the canal with a flatter slope than that already provided.

The equation for the loss of head at the entrance and exit of cuts viz. $h = \frac{v_2^2 - v_1^2}{42}$ mentioned by Shri.N.S.Joshi can be written as

h....

$$h = k_1\left(\frac{v_2^2 - v_1^2}{2g}\right) + k_2\left(\frac{v_2^2 - v_1^2}{2g}\right) \quad \text{where}$$

k_1 and k_2 are the coefficients and will be equal to 0.5 and 1.0 for sudden contraction and sudden enlargement respectively with these values of k_1 & k_2 the equation becomes

$$h = 1.5\left(\frac{v_2^2 - v_1^2}{2g}\right) \text{ or } 1.5\left(\frac{v_2^2 - v_1^2}{64}\right)$$

$$= \frac{v_2^2 - v_1^2}{42}$$

But it has been proposed to adopt gradual transitions with lining at the entry and exist of cuts and in such a case the values of k_1 and k_2 will be 0.1 and 0.2 respectively (please vide Hand book of applied hydraulics by Davis - page 485). With these values of k_1 and k_2 the loss of head due to contraction at entry and enlargement at exit will be negligibly small (please vide calculations attached) and will not affect the original design.

The total loss of head due to transitions in Canal sections in the case of deep cuts are worked out taking into consideration the following losses.

(1) Friction loss: This has been worked by total energy computations, making use of Manning's Formula

(2) Loss at entry: Expressed as $k_1\left(\frac{v_2^2 - v_1^2}{2g}\right)$

where $k_1 = 0.1$

(3) Loss at exit: Expressed as $k_2\left(\frac{v_2^2 - v_1^2}{2g}\right)$

where $k_2 = 0.2$

From energy computations, it is found that the total loss of head is always found to be less than the bed fall provided in the cut. That means necessary head becomes available and the want of provision for the loss of head due to change of sections is made up.

Typical calculations for one cut(in mile No.29) are enclosed herewith for favour of perusal & return, which will show that there will actually be a slight draw down effect at entrance of the cut due to lining instead of afflux.

(V) Deepening of Nallas to accommodate culverts.

I agree that the nallas should not be deepened to accommodate culverts by digging a flat sloped tail channel. But where adequately steep out fall is available it appears there is not much chance of the culvert being choked. The Ghataprabha Left Bank Canal passes through undulating country and slope is generally good.

Syphons.....

9-47 ✓

Syphons as suggested by Shri.N.S.Joshi, involve loss of head which has not been provided for in the sanctioned project. Further the rough cost of syphon in the place of culvert No. 10 was worked out and found to be about 50% more than that for the culvert. Besides separate nalla crossings will have to be provided for service road in the case of syphons. It has been, therefore, proposed to retain culverts (which are proposed only on smaller nallas) as originally proposed in the sanctioned project wherever suitable outfalls are available.

D.A.-
Calcualtion
sheets 3 Nos.

Superintending Engineer,K.I.C.

TB/2210

Copy forwarded with compliments to the Executive Engineer, Ghataprabha L.B.C.Dn.,Ghataprabha, for information.

20.10.

J 26/10
1/11
3 sheets

FHH.
Shin Nawa
3/11
Regrade ✓
W

F. W. D.
File No. S-26
Serial No. 92747
J
26—10 51

No. 602/3/51-Adm.
Government of India.
Central Water and Power Commissi

New Delhi,
the 12 November, 1951.

To
The Secretary to the Govt. of Bombay,
Public Works Department,
Bombay Castle,
Bombay -1.

Sub:- Facility for giving expert advice on Foundation, exploration and grouting.

Sir,

I am to invite a reference to this office endorsement No. 602/3/51-Adm., dated the 5th June, 1951 on the subject cited above and to say that on the basis of the terms of Mr. H. Marek's appointment sanctioned by the Government of India, his services will be made available to the State Government on the following terms and conditions:-

1. SALARY: Proporationate pay and allowances of Mr. Marek for the period of duty and transit in connection with the investigations to be borne by the State Government. His pay is $9,000.00 per annum, subject to Income Tax. In the event of the Indian Income Tax rates being higher than those of U.S.Income Tax rates, the excess over U.S.Tax payable by Mr. Marek will be reimbursed to him by the State Government.

2. TRANSPORTATION COSTS: Transporation costs passage and incidental charges for carriage of personal effect from U.S.A. to India will be borne by the State Government on Pro-rate basis.

3. T. A. : As for Class I Officers of the Government of India. He will, however, not draw any daily allowance.

4. ACCOMMODATION: Free furnished accommodation according to his status, plus xa representation allowance of 62.00 per month.

5. LEAVE SALARY: A share of leave salary will be borne by the State Government.

Yours faithfully,
Sd/-

Id/-
(V. S. ANNASWAMI)
Secretary,
for Chairman, C.W.& P.C.

Copy forwarded for information to:-

1. The Superintending Engineer, Gujerat Irrigation Circle, Baroda.
2. The Superintending Engineer, Southern Circle, BELGAUM.
3. The Superintending Engineer, Karnatak Irrigation.Circle, Dharwar.
4. The Executive Engineer, Gangapur Storage Division, Nasik.
5. The Chief Engineer, Hirakud Dam Project, P.O. Burla, Distt: Sambalpur (Orissa).

To be substituted for this office letter of even number dated the 12th November, 1951.

No. 602/3/51 Adm.
GOVERNMENT OF INDIA
GENERAL WATER & POWER COMMISSION.
.....

New Delhi, the 12th Nov.1951.

To
The Secretary to the Govt. of Bombay,
Public Works Department,
Bombay Castle, BOMBAY 1.

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2. TRANSPORTATION & PASSAGE COSTS: Transporatation costs, passage and incidental charges for carriage of personal effect from U.S.A. to India and back will be borne by the

State....

State Government on Pro-rata basis.

3. T.A.: As for Class I officers of the Government of India. He will, however, not draw any daily allowance.

4. ACCOMMODATION: Free furnished accommodation according to his status, plus a representation allowance of 62.00 per month.

5. LEAVE SALARY: A share of leave salary will be borne by the State Government.

Yours faithfully,

Sd/-
(V.S.Annaswami).21-11-51.
Secretary:
for Chairman, Central Water &Power Commission.

S. 26/101559.

P.W.D.

Submitted with reference to Govt. Endorsement No. S. 26/27774-I(II), dated the 6-4-51 and C.E.'s orders on the margin of Shri N.S.Joshi's letter dated the 18-2-51 underlying it.

2. The S.E., K.I.C. has submitted his remarks on the points raised by Shri Joshi on the design of the Ghataprabha Left Bank Canal. In view of the S.E.'s remarks it is for orders whether any further action on them is necessary.

3. The Central Water and Power Commission has furnished the terms of apptt. of Mr. H.Marek on p. ante. from the Commission, which has been endorsed to the local officers concerned except the S.E., D.I.C., is to be substituted by the Commission's letter at p. ante which has, however, not been endorsed to the local officers concerned. The draft put up for approval may issue ather u.o.r. to the F.D.

Id/-
30-11-51. Thro' E.Br. & D.E.(I).

D.S.(J&E)
D.S.
C.E.

(i) paragraph 2 above:- No action is necessary.

U.O. to F.D. with file 526 XXVIII) dated 7-12-51.

FINANCE DEPTT. XI

Please see office note dated 27-6-51 at page 210 of the P.W.D. File No. 5-26 XXVIII below, the C.W.& P.E.'s letter dated 22-11-51 and para 3 of the P.W.D. note overleaf.

2. The papers may be seen and returned to the P.W.D. with a request that the A.G.'s copy of the endt. at pages 17-18 post may be sent through the F.D. was done on the last occasion.

Id/- 20-12-51. Id/- 7-1-52.

U.O.R. to the P.W.D. dated 7-1-52 with file 5-26 XXVIII

J.Br. P.W.D.

Submitted with reference this Department U.O.R. dated 7-12-51.

2. The necy. addition "through the F.D." ~~xxxxxxxxxxxx~~ ~~xxxxxxxxxxxxxxx~~ has been made after the word 'A.G.Bombay, the endt. at p. ~~xxxx~~ post.

3. The draft at pp. post may now issue.

Id/- 11-1-52. Id/- 11-1-

D.S.(I & E)

Below copy of letter No. 602/3/51-Adm., dated the 12th 22nd November 1951, from the Chairman, C.W.& P.C., New Delhi, regarding facility of giving expert advice on foundation, exploration and grouting.

No. S. 26/2542 J.

P.W.D.
B.C. (Bombay No.1),
14th Jany. 1952.

Copy forwarded to -

The S.E., C.I.C.,
The S.E., D.I.C. (with a copy of letter No. 602/3/51, Adm., dated the 12-11-51.),
The S.E., K.I.C.,
The S.E., S.C.,

with reference to Government Letter No. S. 26/56689-J, dated the 5-7-51 for information and guidance.

2. The S.Es. are requested to substitute the present letter from the Chairman, C.W.& P.C. for his letter of the same No. dated the 12-11-51 on the same subject, endorsed to them direct.

By order of the Governor of Bombay,

A. S.

Copies to the Ex. Engr., G.S.Dn., in continuation of Endt. No. 602/3/51-Adm. dated the 12-11-51 from the Chairman, C.W. & P. C., for information and guidance.

Copies to-

The F.D.,

The A.G., Bombay (Thro : the F.D.)

for information.

Issued.
17-1-52.

* with drafts.

From:

Shri.A.G.Naik, B.E.,M.I.E.,B.S.E(I),
Superintending Engineer,
Karnatak Irrigation Circle,
Dharwar.

To

The Chairman,
Central Water & Power Commission,
New Delhi.

No.Gh.L.B. Dharwar: 28 Nov. 1951.

Subject:- Loan of services of Mr.Hugo Marek

Reference: Your letters No.602/3/51-Adm dated 12-11-1951 and 22-11-1951 and the telegrams dated 24-11-51.

2. A detailed programme in connection with the forth-coming visit of Mr.Hugo Marek to works under Bombay Government is enclosed for your perusal and approval.

14-12-1951 - i) Leave Delhi or Calcutta by air and arrive Bombay.

ii) Leave Bombay by Deccan Queen at 17 hours and arrive Poona at 20-30 hours.

iii) Leave Poona by Bangalore Mail(M. & S.M.Rly.) at 21-30 hours for Ghataprabha

15-12-1951 i) Arrive Ghataprabha at about 7-30 A.M.

ii) 8-30 hours to 13-30 hours - visit to Ajra dam site and back.

iii) 16-30 hours leave Ghataprabha and reach Belgaum at 18-30 hrs.

16-12-1951 8 hrs. to 16 hrs.- Visit to Hadalga and Shettihalli Dam sites and back and halt at Belgaum for inspection of cores and discussion.

17-12-1951 8 hrs. to 14 hrs. - Visit to Kolchi weir and back and discussion.

Leave Belgaum for Poona by Poona Mail at 18-30 hrs and reach Bombay at 10-30 hrs on 18-12-51.

3. The visit of works by Mr.Marek in Gujarat Irrigation Circle will commence from Bombay after his arrival there on 18-12-1951 and the programme of visit in that Circle will be communicated to you directly by the Superintending Engineer, Gujarat Irrigation Circle.

4. It is presumed that the above programme will be suitable for Mr.Marek's visit to works and if it is found to be necessary to make any changes, the same may please be intimated to me by wire to enable me to modify the programme accordingly.

Superintending Engineer,K.I.C.

copy

Express Delivery

✓Copy forwarded with compliments to the Chief Engineer to Government, Public Works Department, Bombay, for information.

Copy forwarded with compliments to Mr.Hugo Marek, Project Officer, Hirakud Dam Project, P.O. Hirakud, Via Sambalpur, ORRISSA, for information and to please intimate the above signed whether the programme drawn as above, is suitable to him for the visit of works.

Copy forwarded with compliments to the Superintending Engineer, Gujarat Irrigation Circle, for information.

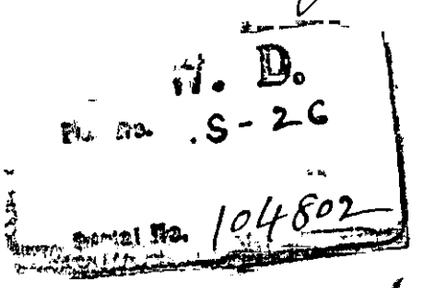
2. The programme of visit of works by Mr.Marek in Gujarat Irrigation Circle, may please be drawn ~~and sent to~~ in continuation of the programme of this Circle and sent to the Chairman, Central Water and Power Commission, New Delhi, for information.

Copy forwarded with compliments to the Superintending Engineer, Southern Circle, Belgaum, for information.

Copy forwarded with compliments to the Executive Engineer, Ghataprabha Left Bank Canal Dn., Ghataprabha, for information and to please reserve the Inspection Bungalow at Ghataprabha for the stay of Mr.Marek and make necessary arrangements.

Copy forwarded with compliments to the Executive Engineer, Irrigation Projects Division (South), Dharwar, for information and guidance.

J 3/12



Shri Nair
3/12 J
1-12 — 3)

S. 26/104802

P. W. D.

J. By

Submitted for information.

2. The main papers (file No. S.26/101559) on the subject are under submission to the C.E. separately. This will be kept with the main papers

Thro: S.E.(I)

4.12.51

4/12

D.E.(I+E)

C.E

5-12-51

Other Name

5/12

(To be kept with S.26/101559)

6/12

9 2 65

From: The Superintending Engineer,
Karnatak Irrigation Circle,
Dharwar.(M.S.M.Railway).

STATE TELEGRAM DATED 5th DECR.1951.

To:-

HUGO MAREK
PROJECT OFFICER HIRAKUD DAM PROJECT
HIRAKUD

REFER TELEGRAM TWENTYSIXTH ~~INSTANT~~ NOVEMBER FROM CHAIRMAN CENTRAL WATER AND POWER COMMISSION NEWDELHI (STOP) YOUR PROGRAMME IN BOMBAY STATE (STOP) ARRIVE BOMBAY FOURTEENTH DECEMBER BY AIR (STOP) REACH GHATAPRABHA FIFTEENTH MORNING VIA POONA (STOP) FIFTEENTH SIXTEENTH SEVENTEENTH INSPECTION OF WORKS (STOP) LEAVE BELGAUM SEVENTEENTH EVENING TO REACH BOMBAY EIGHTEENTH NOON (STOP) FURTHER PROGRAMME IN GUJERAT WILL TAKE TWO DAYS AND THREE ~~(Continued)~~ NIGHTS (STOP) DETAILED PROGRAMME SENT BY POST ON TWENTYEIGHTH NOVEMBER (STOP) WIRE SUITABILITY ---

SUPERINTENDING ENGINEER
KARNATAK IRRIGATION DHARWAR

No. Gh.L.B.

Office of the Superintending Engineer,
Karnatak Irrigation Circle,
Dharwar, 5 Decr.1951.

Copy by post in confirmation ~~xxxx~~ forwarded with compliments to Mr.Hugo Mareck, Project Officer, Hirakud Dam Project, Hirakud P.O., via Sambalpur, ORISSA, for information in continuation of this office No.Gh.L.B. dated 28-11-1951. The approval to the detailed programme drawn therein may please be communicated by wire to this office.

Copy forwarded with compliments to the Chairman, the Central Water & Power Commission, New Delhi, for information with reference to his telegram dated 26th ~~inst.~~ NOV. 1951

Copy f.w.cs. to the Chief Engineer to Government, Public Works Department, Bombay-1.

Copy f.w.cs. to the Superintending Engineer, Gujerat Irrigation Circle, Baroda, for information and communicating the detailed programme of visit to works in his Circle to Mr. Marek. The programme may please be drawn in continuation of the programme in the Southern Circle which terminates with the arrival of Mr.Marek in Bombay at 10.30 hrs. on 18th December 1951.

Copy f.w.cs. to the Superintending Engineer, Southern Circle, Belgaum, for information.

Copy f.w.cs. to the Executive Engineer, Irrigation Project Division(South), Dharwar, for information and guidance.

for Superintending Engineer, K.I.C.

BR/5-12.

18.12
W. D.
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107376

No.Gh.L.B.

Karnatak Irrigation Circle,
Dharwar, Dec.,1951.

To

The Chairman,
Central Water and Power Commission,
New Delhi.

Subject:- Loan of Services of Mr.Hugo Marek.

Sir,

Reference: The letter No.MCC/PR/Gen/1252 dated 5-12-1951 from the Superintending Engineer, Gujarat Irrigation Circle, addressed to the Chief Engineer to Government,P.W.D., Bombay, and copy to you.

2. In continuation of this office letter No.Gh.L.B., dated 28-11-1951 giving a detailed programme of visit of Mr.Marek to works in the Southern and Karnatak Irrigation Circles, the following further detailed programme of Mr.Marek in the Gujarat Irrigation Circle has been drawn in consultation with Superintending Engineer, Gujarat Irrigation Circle,Baroda. Modifications, if any, in the programme of visit of Mr.Marek, to works in Southern, Karnatak Irrigation and Gujarat Irrigation Circles, may please be communicated to me by wire to enable me to arrange accordingly.

18-12-1951	i) Reach Bombay at 10-30 hours ii) Leave Bombay by Saurashtra Mail Bombay Central at 19-0 hours
19-12-1951	i) Arrive Anand at 03-07 hours Leave Anand for Thasra at 04-55 hrs. Arrive Thasra 06-17 hours. ii)Leave Thasra 9-30 hours to Wanakbori. ~~iii~~ Inspection and back to Thasra 19-00 hrs. iii)Leave Thasra 21-15 hours and Arrive Godhra 23-00 hours
20-12-1951	i)Leave Godhra 02-34 hours for Delhi by Frontier Mail and arrive Delhi 19-45 hours.

Yours faithfully,

Superintending Engineer,K.I.C.

Copy forwarded with compliments to the Chief Engineer to Government, Public Works Department, Bombay, for information with reference to the Superintending Engineer,Gujarat Irrigation Circle's letter under reference.

S.26/108817

S.26/101559
Ltr F.D. 7/12/51

J 18/12

P.W.D

J.B.r

These papers will be kept with file No S.26/101559 as proposed in D.O. No. 67 dated 10.12.51

14-12-51

14-12-51

Ether Nuclear
14/12

13-12-51

Ether Nuclear
14/12

A.W. (15-12-51)

S-26
108817

√55 to 71

Telegram dated the 8th December 1951.

STATE

From
Shri.A.G.Naik,
Superintending Engineer,
Karnatak Irri: Circle.

To
Mr.Hugo Marek,
Project Officer,
Hirakud Dam Project,
Hirakud (Sambalpur), Orissa.

YOUR PROGRAMME IN GUJARAT 18th DECEMBER LEAVE BOMBAY FOR ANAND 19.00 HOURS 19TH DECEMBER LEAVE ANAND 04.55 HOURS FOR THASRA AAA THASRA OUT AND BACK FROM 09.30 HOURS TO 19.00 HOURS AAA LEAVE THASRA 21.15 HOURS FOR GODHRA 20TH DECEMBER LEAVE GODHRA FOR DELHI 02.34 HOURS

NAIK
SUPERINTENDING ENGINEER
KARNATAK IRRIGATION CIRCLE

No. GK.L.B

Office of the Superintending Engineer,
Karnatak Irrigation Circle,
Dharwar, 8th December 1951.

Copy by post in confirmation forwarded with compliments to Mr.Hugo Marek, Project Officer, Hirakud Dam Project, Hirakud (Sambalpur), Orissa.

2. The detailed programme is as under :-

18-12-1951
i) Reach Bombay at 10.30 hours
ii) Leave Bombay by Saurashtra Mail Bombay Central at 19.00 hours.

19-12-1951
i) Arrive Anand at 03.07 hours
Leave Anand for Thasra at 04.55 hours. Arrive Thasra at 06.17 hours.
ii) Leave Thasra 9.30 hours to Wanakbori. Inspection Out a nd back to Thasra 19.00 hours.
iii) Leave Thasra 21.15 hours and arrive Godhra 23.00 hours.

20-12-1951
i) Leave Godhra 02.34 hours for Delhi by Frontier Mail and arrive Delhi 19.45 hours.

Superintending Engineer,
Karnatak Irrigation Circle, Dharwar.

8.12

Copy forwarded with compliments to the Chief Engineer, P.W.D., Bombay for information with reference to the Superintending Engineer, Gujarat Irrigation Circle's letter No. mcc/pa/con/12152 dated 5-12-1951

75

~~E'Br.~~ 16 P.W.D.

~~Submitted for information.~~

~~Record~~

~~S.H.S.~~

J. Br. P.W.D.

These papers will be kept with the main papers (File No. 5.26/101559) — Vide p.14 ante N. & 14.12-51.

19.12.51

20-12-51

Supdt.

S/Sh Nath
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J

Very Urgent

No.Gh.L.B. 39 77 Dharwar, 2 Feb.,1952.

From

Shri. A.G.Naik, B.E.,M.I.E.,B.S.E(I),
Superintending Engineer,
Karnatak Irrigation Circle,Dharwar.

To

The Chairman,
Central Water & Power Commission,
New Delhi.

Subject:-: Loan of Services of Mr.Hugo Marek.

Reference: Your letter No.602/3/51 Adm 613
dated 12/22nd November 1951
addressed to the Secretary to
Government of Bombay,P.W.D.Bombay.

Sir,

Mr.Hugo Marek, Project Officer, Hirakud Dam Project, Hirakud(Sambalpur),Orissa, has since inspected the works under the Bombay State and the days of actual inspection in each of the Circles apart from the days in transit are as shown below. Please intimate the total amount debitable to the Bombay State on account of Pay, Travelling Allowance and other allowances of Mr.Hugo Marek for the inspection and transit period as early as possible as it has to be adjusted before the end of March 1952.

Karnatak Irrigation Circle	-	15th and 16th December 1951
Southern Circle	-	17th December 1951
Gujarat Irrigation Circle	-	Presumably 2 days

The debit will have to be raised through the Accountant General, Bombay.

Yours faithfully,

Superintending Engineer,K.I.C.Dharwar.

Copy forwarded with compliments to:

✓ the Chief Engineer to Government,P.W.D.Bombay.

The charges will be debited in the following proportions to each of the three Circles concerned:-

Southern Circle	1/5 .	(Belgaum Division,Belgaum
Karnatak Irrigation Circle	2/5	Irrigation Projects Dn(South) Dharwar.
Gujarat Irrigation Circle	2/5	Mahi canals Construction Dn, Thasra.

P.T.O.

✓ 40

the Superintending Engineer, Southern Circle, Belgaum.

the Superintending Engineer, Gujarat Irrigation Circle, Baroda.

the Executive Engineer, Irrigation Projects Division (South), Dharwar, with reference to his No.Gh.L.B./54 of 5-1-1952.

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2.2.

J.Br. P.W.D.

Submitted for information.

9.2.52 Supdt. X Br

* M. to note in connection with correspondence, etc.

D.S.(I+E) 11/

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[illegible] 5-26
[illegible] 12097

Supdt. Nasik
6/2

J

No. E-I-PE-111/5387.
Government of India,
Office of the Chief Engineer,
Hirakud Dam Project, C.W.& P.C.,
P.O.Burla, Via Sambalpur (Orissa),

Dated Burla, the 29 April, 1953.

To

The Superintending Engineer,
Karnatak Irrigation Circle,
Camp Via Dharwar.

Subject:- Advice of Mr. Hugo Marek on foundation treatment in Bombay State

reference: Your No. Gh. L.B. dated 17-4-1953.

Sir,

I am to say that inspite of a large number of reminders issued the report was not received from Mr. Marek. Now he has gone back to U.S.A. and is no more available here.

Yours faithfully,

Sd/- C.K.Keswani
Executive Engineer,
Personal Assistant,
For Chief Engineer, Hirakud Dam Project.

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No. Gh. L.B.

Karnatak Irrigation Circle,
Post Box No. 28,
Dharwar, 4th May 1953.

Copy forwarded with compliments to the Executive Engineer, Irrigation Projects Division (South), Dharwar, for information.

2. Since no advice is given, the question of rasing any debit does not arise.

Id/-
Superintending Engineer, K.I.C.

Copies forwarded with compliments to:

the Chief Engineer to Government (Irrigation),
the Chairman, C.W.& P.C., New Delhi

Public Works Department, Bombay, for information with reference to Government P.W.D. endorsement No. S-26/2542-J, this office No. Gh.L.B., dated 17-4-1953. dated 14-1-1952.